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ART 34 AMBT

We claim:-

1. A process for the production of a wood body having increased surface hardness, characterized in that an untreated wood body is impregnated with an aqueous solution of
 - A) an impregnating agent consisting of a 1,3-bis(hydroxymethyl)-4,5-dihydroxyimidazolidin-2-one modified with a C₁₋₅-alcohol, a polyol or mixtures thereof, and
 - B) a catalyst from the group consisting of ammonium or metal salts, organic or inorganic acids or mixtures thereof, dried and then hardened at elevated temperature.
2. The process according to claim 1, characterized in that an impregnating agent C) from the group consisting of 1,3-bis(hydroxymethyl)-4,5-dihydroxyimidazolidin-2-one, 1,3-dimethyl-4,5-dihydroxyimidazolidin-2-one, dimethylolurea, bis(methoxymethyl)urea, tetramethylolacetylenediurea, 1,3-bis(hydroxymethyl)imidazolidin-2-one, methylolmethylurea or mixtures thereof is concomitantly used.
3. The process according to either of claims 1 and 2, characterized in that an impregnating agent D) from the group consisting of a C₁₋₅-alcohol, a polyol or mixtures thereof is concomitantly used.
4. The process according to claim 3, characterized in that methanol, ethanol, n-propanol, isopropanol, n-butanol, n-pentanol, ethylene glycol, diethylene glycol, 1,2- and 1,3-propylene glycol, 1,2-, 1,3- and 1,4-butylene glycol, glycerol, polyethylene glycols of the formula HO(CH₂CH₂O)_nH, where n is from 3 to 20, or mixtures thereof are concomitantly used.
5. The process according to claim 4, characterized in that methanol, diethylene glycol or a mixture thereof is concomitantly used.
6. The process according to any of claims 1 to 5, characterized in that the impregnating agents A) and, if appropriate, C) and D) are used in a concentration of from 1 to 60% by weight in the aqueous solution.
7. The process according to any of claims 1 to 6, characterized in that metal salts from the group consisting of metal halides, metal sulfates, metal nitrates, metal tetrafluoroborates, metal phosphates or mixtures thereof are used as catalyst B).
8. The process according to claim 7, characterized in that metal salts from the group consisting of magnesium chloride, magnesium sulfate, zinc chloride, lithium

chloride, lithium bromide, boron trifluoride, aluminum sulfate, aluminum chloride, zinc nitrate, sodium tetrafluoroborate or mixtures thereof are used as catalyst B).

- 5 9. The process according to any of claims 1 to 6, characterized in that ammonium salts from the group consisting of ammonium chloride, ammonium sulfate, ammonium oxalate, diammonium phosphate or mixtures thereof are used as catalyst B).
- 10 10. The process according to any of claims 1 to 6, characterized in that organic or inorganic acids from the group consisting of maleic acid, formic acid, citric acid, tartaric acid, oxalic acid, p-toluenesulfonic acid, hydrochloric acid, sulfuric acid, boric acid or mixtures thereof are used as catalyst B).
- 15 11. The process according to any of claims 1 to 8, characterized in that magnesium chloride is used as catalyst B).
- 20 12. The process according to any of claims 1 to 11, characterized in that the catalyst B) is used in a concentration of from 0.1 to 10% by weight, based on the amount of the impregnating agent A) and, if appropriate, C) and D).
- 25 13. The process according to any of claims 1 to 12, characterized in that the impregnated wood body is dried at a temperature of from 20 to 60°C.
- 30 14. The process according to any of claims 1 to 13, characterized in that the impregnated and dried wood body is hardened at a temperature of from 80 to 170°C.
- 35 15. The process according to claim 14, characterized in that the impregnated and dried wood body is hardened at a temperature of from 90 to 150°C.
- 40 16. The process according to any of claims 1 to 15, characterized in that the impregnated and dried wood body is hardened over a period of from 10 min to 72 hours.
17. The process according to any of claims 1 to 16, characterized in that, after the impregnation and drying, the wood body is fixed so that a change in the shape of the wood body during the hardening is counteracted.
18. The process according to claim 17, characterized in that the wood body is fixed in a heatable press.

19. A wood body having increased durability, dimensional stability and surface hardness, obtainable by a process according to any of claims 1 to 18.

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